

Attorney Docket No.: T7106(C)  
Serial No.: 10/583,230  
Filing Date: June 16, 2006  
Confirmation No.: 8226

**Amendments to the Claims:**

The listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

Claim 1 (Currently amended) A microfluidic system comprising first and second fluid supply sources, the first and second supply sources supplying at least ~~a first and second~~ 1000 microfluidic reactors arranged in parallel via an upstream channel or channels, said upstream channel or channels positioned before the microfluidics reactors, the ~~at least first and second~~ reactors each having at least one downstream channel which is positioned after the reactors, wherein for ~~at least one reactor~~ all the reactors, the resistance of each of its upstream channels is at least 10 times larger than the resistance of the downstream channel or channels.

Claim 2 (Canceled)

Claim 3 (Canceled)

Claim 4 (Currently amended) A microfluidic system according to claim 1, wherein the resistance of all the upstream channels is at least 100 times larger than the resistance of the downstream channels.

Claim 5 (Previously Presented) A microfluidic system according to claim 1, wherein the microfluidic reactors are all identical.

Claim 6 (Canceled)

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Claim 7 (Withdrawn): A process for preparing a two phase composition using a microfluidic system comprising first and second fluid supply sources supplying first and second microfluidic reactors via an upstream channel, the first and second reactors each having at least one downstream channel, wherein for at least one reactor, the resistance of each of its upstream channels is at least 10 times larger than the resistance of the downstream channel or channels; wherein for at least one reactor, one upstream channel becomes a continuous phase and one upstream channel becomes a dispersed phase in a downstream channel.

Claim 8 (Withdrawn) Process according to claim 7, wherein the process is for preparing an oil and water containing composition.

Claim 9 (Withdrawn) Process according to claim 8, wherein the oil and water containing composition is selected from the group comprising food products and personal care products.

Claim 10 (Withdrawn) Process according to claim 9, wherein the food products are selected from the group comprising sauces, dressings, spreadable emulsions, fresh cheese, cream cheese and mayonnaise.

Claim 11 (Withdrawn) Process according to claim 9, wherein the personal care products are selected from the group comprising skin cream, shampoo, liquid soap.

Claim 12 (Withdrawn) Process according to claim 7, wherein the two fluid sources have a viscosity ratio of at least 5, when measured at  $1\text{s}^{-1}$  at  $25^{\circ}\text{C}$ .

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Claim 13 (New) A microfluidic system according to claim 1, wherein the microfluidic system comprises at least the following 3 layers:

- (i) an inlet/outlet layer comprising inlet channels for first and second fluid supply source and at least one outlet channel;
- (ii) a connecting layer comprising a plurality of side channels with varying diameter and/or length; and
- (iii) a microfluidic layer, which comprises microfluidic reactors which are connected to the connecting channels via a port and through the connecting channels are in fluid connection with the inlet and outlet channels of the inlet/outlet layer.

Claim 14 (New) microfluidic system according to claim 13 wherein the system comprises a plurality of connecting layers connecting a plurality of microfluidic layers to a single inlet/outlet layer.